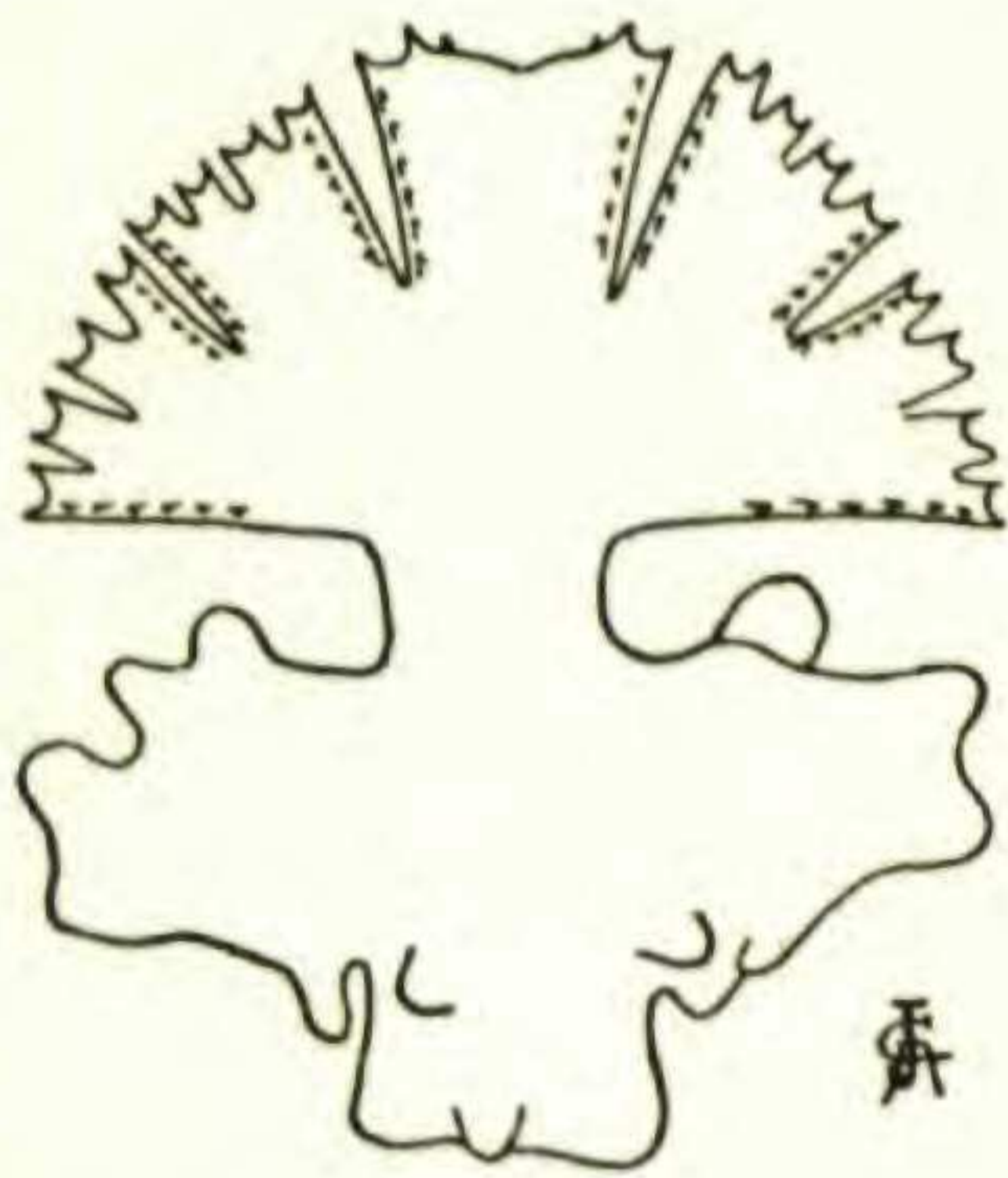


DIVISION IN DESMIDS UNDER PATHOLOGIC CONDITIONS.— In looking over certain desmid material during the past summer a character was noticed which to my knowledge has not been called to notice in any published paper. It is a well known fact that the microscopic plants, Desmids, Diatoms, and other small or unicellular algae furnish a considerable amount of the food supply of various small fresh water animals. The effect upon the plant cell in such a case is peculiar. In several cases in material obtained from Reading and South Framingham, Massachusetts, there were also in the bottles various Entomostraca, the two genera bearing upon the matter



in hand being Daphnia and Cypris. These small crustacea have bivalve shells which are transparent, allowing the food to be seen after it has entered the digestive tract. It was noted that the change was not always immediately fatal to the Desmid that was swallowed. In a number of cases the cell had not only continued to live but had continued to carry on its division. In such cases, how-

ever, instead of the newly formed cells being like the old cells as is the usual condition, they appeared as contorted and bizarre forms quite unlike the old semi-cells. This is of course due in some way to the action of the chemical contents of the digestive tract upon the cells of the plants, thus causing truly pathologic conditions. It was noted in three genera, Cosmarium, Euastrum and Micrasterias, that such conditions occurred. The last, of which a figure is given, furnishes perhaps the best example of deviation from the typical form. The end lobe is fairly typical in its general shape but has an additional small lobe on the face. The lateral lobes are not as well marked, being on one side almost entirely fused, on the other less so. In both cases there are various additional smaller lobes. Altogether, if broken away from the old semi-cells, it would never be taken for a semi-cell of *Micrasterias papillifera*, which it nevertheless is. It would be interesting to determine the sort of form that would be produced if these peculiar cells were to divide again. Some clue as to whether or not these cells would exert an influence on the semi-cells derived from them, might perhaps be obtained from actual experimenting.—JOSEPH A. CUSHMAN, Boston Society of Natural History.